

ABSTRACT OF THE DISCLOSURE

[0040] A vehicle vision system that uses a depth map, image intensity data, and system calibration parameter to determine a target's dimensions and relative position. Initial target boundary information is projected onto the depth map and onto the image intensity. A visibility analysis determines whether the rear of a target is within the system's field of view. If so, the mapped image boundary is analyzed to determine an upper boundary of the target. Then, vertical image edges of the mapped image boundary are found by searching for a strongest pair of vertical image edges that are located at about the same depth. Then, the bottom of the mapped image boundary is found (or assumed from calibration parameters). Then, the target's position is found by an averaging technique. The height and width of the target are then computed.